# AIR QUALITY

## Purpose

The County recognizes the importance of clean air for a healthy environment and vibrant communities for current and future generations.

- Clean air protects the health of residents
- Clear skies and clean air are attractive for tourism, which contributes to economic vitality
- Clean air sustains our water resources, crops, and ecosystems
- Achieving clean air helps to reduce greenhouse gas emissions and the effect of global climate change
- Clean air is a highly valued resource by residents and visitors

This chapter focuses on goals and policies that the County will pursue to improve local and regional air quality and to reduce San Luis Obispo County's contribution to global climate change.

## Introduction

In the simplest of terms, we must have air to live. According to the Environmental Protection Agency, each of us breathes over 3,000 gallons of air each day (USEPA 2008). The quality of the air we breathe varies based on where we live, work, and play. Polluted air can make people sick and it can damage trees, crops, lakes, animals, and buildings. The young, elderly, sick, and active often experience worse reactions to air pollution than the general public.

# AIR QUALITY

**Appendix 2** provides additional information about the county's air resources and air quality as well as a climate change background.

## Local Conditions

The primary factors affecting air quality in San Luis Obispo County are (1) the prevailing climatic conditions; (2) the topographic and geographic features of the region; and (3) the type, quantity, and location of pollutant emissions.

### REGION

San Luis Obispo County is part of the South Central Coast Air Basin, which also includes Santa Barbara, and Ventura counties. For geography, climate, and meteorology, the county can be divided into three general regions: Coastal Plateau, Upper Salinas River Valley, and East County Plain.

*The **San Luis Obispo County Air Pollution Control District** **(APCD)** is the local agency working to protect the health of over 260,000 county residents by preserving good air quality.*

The Coastal Plateau is immediately inland from the Pacific Ocean, is typically 5 to 10 miles wide, includes about 75 percent of the county's population and development, and yields higher levels of air pollutants as a result. It ranges in elevation from sea level to about 500 feet and is bounded to the northeast by the Santa Lucia Mountain Range.

The Upper Salinas River Valley lies inland from the Santa Lucia Range in the northern portion of the county and includes about 25 percent of the county's population, but it has some of the highest levels of ozone, perhaps due to the transport of ozone precursors from the other two county regions.

The East County Plain lays farther inland along the eastern flank of the county and includes about one third of the county's area, while housing less than 1 percent of its population. The county's local air quality conditions have been increasingly adversely affected by air pollution from the San Joaquin Valley. The Carrizo Plains in the far east end of the county also has high ozone levels. The Air Pollution Control District has concluded that this also due to pollutant transport from other areas.

## LOCAL AIR QUALITY

Pollution sources in the county vary widely from large power plants to small household painting projects. Motor vehicles are the largest contributor to air pollution in the county, which includes local, regional, and statewide circulation. Inefficient land use patterns, specifically the separation of housing from employment and commercial centers, greatly contribute to air pollution. Most pollution control strategies seek to reduce vehicle miles traveled and make greater use of alternative transportation and clean fuels.

County skies are typically clear and blue with little of the characteristic brown haze associated with areas considered to have poor air quality, yet we still have air pollution issues. The State standard for particulate matter (PM10) is violated several times throughout the year, resulting in the county's non-attainment status with the State's PM10 standard.

In 2005, the California Air Resources Board (CARB) approved the nation's most health protective ozone standard with special consideration for children's health. Based on local monitoring data, the county has been deemed non-attainment for the state 8-hour average ozone. With the federal government's recent adoption of new ozone standard 0.075 ppm, (compared to the State Ozone standard of .070 ppm), the county's attainment status is dependent on monitoring reports from 2006, 2007 and 2008. Designation is expected to occur in 2010, but preliminary analysis indicates the county's non-attainment status. Air quality in the county meets established standards for lead, carbon monoxide, and sulfur dioxide.

## Climate Change

The International Panel on Climate Change's (IPCC) Fourth Assessment Report on Climate Change states that the concentration of greenhouse gases (GHG) such as carbon dioxide in the atmosphere has increased significantly as a result of human activities since 1750 (IPCC 2007). These global increases in GHG concentrations are primarily due to fossil fuel use, land-use change, and agriculture. Health effects from global climate change may arise from temperature increases, climate-sensitive disease, and extreme events. Global warming may also contribute to air

***Air Pollutants** are amounts of foreign and/or natural substances occurring in the atmosphere that may result in adverse effects to humans, animals, vegetation, and/or materials. - CARB*

*The **Clean Air Act** requires EPA to set **National Ambient Air Quality Standards** for six common air pollutants, known as "**criteria pollutants**," that are found all over the United States: particle pollution (particulate matter), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead.*

*EPA regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels.*

quality problems from increased frequency of smog and particulate air pollution.

California is one of the top GHG producers in the world. The California Energy Commission ranks the state as the second largest emitter of GHG in the country and twelfth to sixteenth largest in the world (CEC). In December 2007, the CARB released an aggregate, statewide inventory of California GHG emissions for 1990 (427 million metric tons of $CO_2$ equivalent) and 2004 (484 million metric tons of $CO_2$ equivalent). The main sources of GHG emissions in California in 2004 were on-road transportation (38 percent), electricity generation (25 percent), and industrial (20 percent) sectors. **Appendix 2** provides an expanded review of the scientific and regulatory context for climate change.

In 2005, the Governor announced GHG reduction targets for California by Executive Order (S-03-05):

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels;
- By 2050, reduce GHG emissions to 80% below 1990 levels.

*The **California Global Warming Solutions Act of 2006** (AB 32) sets targets for the reduction of greenhouse gas emissions in California to slow the onset of human-induced climate change.*

In 2006, the California Legislature adopted Assembly Bill 32, the California Global Warming Solutions Act of 2006 (AB 32). AB 32 requires CARB, the state agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve greenhouse gas emissions equivalent to 1990 statewide levels by 2020, which is equivalent to an approximate 15% reduction below 2005 GHG levels.

In December 2008, CARB approved the AB 32 Scoping Plan, which outlines regulatory and market mechanisms necessary to achieve a 15% reduction by 2020. Among the many strategies included in the plan are a cap-and-trade system and a Renewable Portfolio Standard (RPS) for energy production. In addition, the Scoping Plan charges local governments with reducing statewide emissions by 5 million metric tons by 2020 through vehicle trip reduction and local initiatives.

Communities address climate change through implementation of GHG emissions reduction programs and actions related to land use, transportation, energy, and waste. Local actions often take the shape of general plan policies or land use/zoning ordinance revisions that promote compact and mixed-use development, decrease vehicle trips, increase alternative transportation, promote "green" or sustainable building and design practices, improve energy efficiency, and reduce waste.

## 2006 GREENHOUSE GAS EMISSIONS BASELINE INVENTORY REPORT

The County conducted a baseline inventory of greenhouse gas emissions from county operations and communitywide activities. The complete report is attached as **Appendix 1**.

*"**Greenhouse gas**" or "**greenhouse gases**" include all of the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.*

The 2006 Greenhouse Gas Emissions Baseline Inventory found that, in the baseline year 2006, the community (unincorporated San Luis Obispo County) emitted approximately 1,464,131 metric tons of CO2e. The transportation sector was by far the largest emitter (66.7%), producing approximately 976,585 metric tons of CO2e in 2006. Emissions from the residential, commercial, and industrial sectors accounted for a combined 24.1% of the total while emissions from livestock and agricultural equipment comprised 10% of the total. Due to the 58% average methane recovery rate of local landfills the waste sector produced a net sink in emissions of 0.8%.

County operations and facilities produced approximately 33,970 metric tons of greenhouse gas emissions in 2006 - approximately 2.3% of total community-wide emissions in the county. County emissions are comprised of employee commute trips, waste, streetlight electricity, energy consumption from water and sewage facilities, building energy, vehicle fleet fuel consumption, and miscellaneous equipment. Employee commute was by far the largest contributor to the County's emissions (74.4%) with 25,257 metric tons of carbon dioxide equivalent. The second largest contributor (14.6%) was from energy consumption in County-owned and –operated facilities.

## Relationship to other Elements, Plans, and Programs

Ultimately, these goals and policies are intended to improve quality of life throughout the county and to support the General Plan's goals by improving public health, boosting the local economy, and reducing damage to trees, crops, plants, lakes, animals, buildings, and historical structures and monuments from air pollutants.

General Plan policies related to air quality are designed to help ensure that regional and local air quality is as healthful as possible. This Element contains specific air quality policies; however, all Elements of the General Plan must work together to form a cohesive set of goals and policies that can help produce clean air for generations to come.

The County's Guiding Principles for Strategic Growth address the interconnection of land use, resource conservation, and quality of life. The Land Use Element's Framework for Planning (Inland and Coastal) reflects the County's Strategic Growth principles and goals. The following air quality goals, policies, and implementation strategies are compatible and consistent with the Strategic Growth principles and provide specific direction to achieve and maintain the County's desired air quality.

Other chapters of this Element, notably the Energy chapter, also include goals, policies, and implementation strategies that will directly and indirectly improve and protect air quality

## Major Issues

The current and projected air quality challenges for San Luis Obispo County can be categorized into six key issues. While the County cannot singularly solve all of them, outlining the problems that need to be solved allows the County to contribute its share to improve regional air quality for current and future generations.

### LOCAL AIR QUALITY

1) Historical land use decisions now contribute to poorer air quality. The land use patterns and transportation system

developed over the last 50 years have led to ever-increasing vehicle trips and vehicle miles traveled that affect the county's air quality. In recent years, the number of vehicle miles traveled has increased faster than the county's population. Today, most destinations are designed to provide convenient auto access to the exclusion of other modes of travel. New, efficient land use patterns that promote other transportation options are needed to maintain and improve future air quality in the midst of continuing growth.

2) County government has the opportunity to provide leadership on air quality issues and lead by example. As one of the region's largest employers, the County operates a large vehicle fleet. The County can take a leadership role by implementing trip reduction and alternative fleet operations programs. This will reduce its own emissions and provide a model and supporting infrastructure for the private sector.

3) Proper application of environmental law can minimize adverse air quality impacts of growth. The environmental assessment process required under the California Environmental Quality Act (CEQA) is an essential tool for the County to communicate with other agencies and the public about the air quality impacts of development. Strong and consistent application of CEQA can make a significant difference in minimizing project-level air quality impacts.

## REGIONAL AIR POLLUTION (OZONE AND ITS PRECURSORS)

4) Future growth can worsen the County's ozone and PM10 problems. Non-attainment of ozone and particulate air quality standards affects the economic, environmental, and social quality of life in San Luis Obispo County. Future growth in a sprawl pattern of development is likely to exacerbate existing air pollution violations of state health standards.

5) Regional coordination is needed. Coordination and cooperation among many jurisdictions are difficult to achieve. Working together for a common interest can

***We will recognize success when…***

- *At least 75% of new development in the unincorporated areas occurs within urban and village areas.*
- *Most new housing is located in close proximity to employment centers and services.*
- *Most new housing is located with convenient access to major highways and bus routes.*
- *All new neighborhoods are designed in accordance with strategic growth principles and policies.*
- *A higher percentage of people ride the bus, walk, and bicycle to daily destinations.*
- *A Climate Action Plan to reduce GHG from all sources is fully implemented.*
- *A broad cross-section of the public supports a variety of efforts to reduce GHG emissions.*
- *Most vehicles in the County fleet consist of clean-fuel vehicles.*
- *Communitywide GHG emissions are reduced by 15% percent from the baseline year of 2006 by 2020.*

multiply the resources available to accomplish air quality goals that often impact neighboring cities and counties.

### GLOBAL CLIMATE CHANGE

6) Global climate change threatens the county's air quality and quality of life. Atmospheric concentrations of carbon dioxide ($CO^2$) are increasing, primarily from the burning of fossil fuels and land use change. This has led to an unprecedented rate of global climate change that could have profound implications for San Luis Obispo County. It could also complicate regional attempts to achieve ozone ambient air quality standards, since warmer temperatures lead to increased formation of ozone. Policies are needed that reduce greenhouse gas emissions while also preparing the county to adapt to a changing climate.

## Goals, Policies, and Implementation Strategies

The following section relates each of the six major issues mentioned above to specific air quality goals, policies, and implementation strategies.

The intent of the following goals, policies, and implementation strategies is to improve local and regional air quality and help reduce global climate change. This will improve public health; boost the local economy; and reduce pollution damage to trees, crops, plants, lakes, animals, and buildings.

TABLE AQ-1
AIR QUALITY GOALS

| | |
|---|---|
| Goal AQ 1 | Per capita vehicle-miles-traveled countywide will be substantially reduced. |
| Goal AQ 2 | The County will be a leader in implementing air quality programs and innovations. |
| Goal AQ 3 | State and federal ambient air quality standards will be attained and maintained. |
| Goal AQ 4 | Greenhouse gas emissions from County operations and communitywide sources will be reduced from baseline levels by a minimum of 15% by 2020. |
| Goal AQ 5 | The County will adapt to adverse climate change. |

**GOAL 1** PER CAPITA VEHICLE- MILES-TRAVELED COUNTYWIDE WILL BE SUBSTANTIALLY REDUCED.

*Policy AQ 1.1 Compact development*

Encourage compact land development by concentrating new growth within existing communities and ensuring complete services to meet local needs

◇ ***Implementation Strategy AQ 1.1.1 Strategic Growth Principles***

Implement Strategic Growth principles and, as needed, amend applicable ordinances and policies to:

a. Locate new community commercial centers near major activity nodes and transportation corridors. Community commercial centers should provide goods and services that residents have historically had to travel outside of the community to obtain.

b. Promote new commercial development and needed services and facilities in rural communities that provides for the immediate needs of the local residents. (E4)

c. Direct most new residential development away from rural areas and concentrate it in higher density residential areas located near major transportation corridors and transit routes, where resources and services are available. (E2 revised)

d. Design new commercial development to encourage and facilitate pedestrian circulation within and between commercial sites and nearby residential areas rather than being designed solely to serve vehicular circulation. (E3)

e. Promote use of first floor space in commercial centers for retail, food service, financial institutions, and other high-volume commercial uses. Allow and encourage residential uses in the upper floors of commercial buildings. (E6)

f. Encourage new office development near major transportation corridors and concentrations of residential uses. (E5)

***Vehicle Miles Traveled*** *(VMT) are the number of miles traveled by a given vehicle in a specified period. This number is sometimes estimated for the entire fleet of on road vehicles. (SLO APCD, CAP)*

*Bike racks on buses and transit centers facilitate use of alternative transportation modes.*

g. Encourage new residential development to be within walking distance (1/2 mile or less) to public activity centers such as schools, libraries, parks, and community centers. (E2)

*Policy AQ 1.2 Reduce vehicle miles traveled*

Require projects subject to discretionary review to minimize additional vehicle travel.

◇ ***Implementation Strategy AQ 1.2.1 VMT reduction strategies***

Strategies to reduce new demand for vehicle travel may include, but are not limited to, minimum densities along transit corridors, Transportation Demand Management, and alternative transportation infrastructure as follows:.

a. All new development in the Residential Multifamily (RMF) land use category located within 1/2 mile of a transit node, existing bus route, or park and ride facility with regularly scheduled, daily service should be have a minimum density of 15 dwelling units per acre.

b. New multi-family projects subject to discretionary review should include Transportation Demand Management (TDM) measures, such as reduced parking for affordable, workforce, or senior housing projects, subsidized public transportation passes, car sharing, vanpools, shuttles, or ride-matching programs, based on site-specific review.

c. New or expanded commercial, industrial, public, or mixed-use projects with 25 employees or more should provide TDM programs such as parking cash-out, subsidized transit passes, ridesharing incentives, vanpools, employee showers, and bicycle parking and storage facilities.

d. Install adequate and secure bicycle racks and storage facilities at a ratio of 1 per every 10 vehicle spaces in new commercial and public buildings with a corresponding reduction in required automobile parking spaces. Showers and changing facilities should also be encouraged. (E10)

e. Incorporate design features and infrastructure into new projects that enable access by transit, bicycling, and walking.

f. Establish minimum residential densities on appropriate sites in urban areas where resources are available.

g. Rezone land to Residential Multi-Family (RMF) in existing urban areas where resources and services are available and expanded.

### *Policy AQ 1.3 Convenient alternative transportation*

Require new development to provide safe and convenient access to alternative transportation within the project area and safe access to public transportation as feasible.

◇ ***Implementation Strategy AQ 1.3.1 Connectivity in new development***

Require new development to construct paths that connect land uses and other non-motorized routes, safe road crossings at major intersections and secure, weatherproof bicycle parking and storage facilities, and long-term maintenance of such facilities. (E7 modified)

### *Policy AQ 1.4 Alternative transportation improvements*

Where new development is required to provide necessary alternative transportation improvements, such improvements should be in place, or otherwise guaranteed, before or concurrent with construction of the new development.

### *Policy AQ 1.5 Transportation efficiency*

Improve the operating efficiency of the transportation system by reducing vehicle travel demand and expanding opportunities for multi-modal travel.

◇ ***Implementation Strategy AQ 1.5.1 Countywide VMT Reduction Program***

Implement a countywide Vehicle Miles Traveled (VMT) Reduction Program in partnership with the San Luis Obispo Air Pollution Control District and San Luis Obispo Council of Governments. The program should identify specific

Transportation Demand Management (TDM) strategies for reducing VMT.

◇ ***Implementation Strategy AQ 1.5.2 Use of LTF for transit***
The County, through its role in the San Luis Obispo Council of Governments, will give high priority to increasing the share of Local Transportation Funds (LTF) allocated to transit in support of the Long Range Transit Plan and to increase flexibility in bus and shuttle services.

◇ ***Implementation Strategy AQ 1.5.3 Evaluate Countywide Transportation Tax***
Conduct a feasibility analysis of a Countywide Transportation Tax (local option sales tax measure) with a share set aside for transit projects.

◇ ***Implementation Strategy AQ 1.5.4 Include bus routes in Land Use and Circulation Element***
Work with the Regional Transit Authority and local cities to identify and map existing and future bus lines (routes) and transit corridors for inclusion in the Land Use and Circulation Element.

*Policy AQ 1.6 Multi-modal transportation*
Coordinate with other local governments and agencies to develop a multi-modal transportation system. This system should enable convenient and efficient use of transportation alternatives (E16). It should also provide multi-modal transfer sites that incorporate auto, bike parking, transit, pedestrian and bicycle paths, as well as park and ride pickup points.

◇ ***Implementation Strategy AQ 1.6.1 Identify intermodal hubs***
Encourage the San Luis Obispo Regional Transit Authority, San Luis Obispo Council of Governments, local cities and transit providers, and other agencies to (1) identify sites for intermodal hubs, and (2) support funding to upgrade and create intermodal hubs or transit stations and facilitate seamless connections between transit services and other multi-modal forms of transportation.

◇ ***Implementation Strategy AQ 1.6.2 Amend Land Use Element: Transit Oriented Development***

Amend the Land Use Element to encourage compact, mixed-use, and infill development at identified transit nodes and Transit Oriented Development (TOD) sites. Incentives may include flexible standards and streamlined permit processing for mixed use and affordable housing. Prepare and release a public review draft Land Use Element amendment by the end of 2011.

◇ ***Implementation Strategy AQ 1.6.3 Adopt Complete Streets Ordinance***

Adopt a "Complete Streets" Ordinance to ensure that the County's streets and roads are designed and operated as a balanced, multimodal transportation network that enables safe access for all users. "All users" includes pedestrians, bicyclists, persons with disabilities, movers of commercial goods, transit vehicles, and users, and motorists of all ages and abilities. Prepare public review draft ordinance and Land use and Circulation Element amendments by the end of 2014.

◇ ***Implementation Strategy AQ 1.6.4 Support new transit nodes***

Work with the San Luis Obispo Regional Transit Authority, San Luis Obispo Council of Governments, local cities and transit providers, and other agencies to identify transit nodes appropriate for mixed-use development and promote transit-oriented development through the following or other means where appropriate:

a. Rezoning of commercial properties to residential and/or mixed use,

b. Flexible zoning and standards for multi-family housing and mixed-use development,

c. Flexible minimum parking and building height limitations,

d. Density bonus programs,

e. Design guidelines for private and public spaces, and

h. Incentives for redevelopment of underutilized areas.

*Shifting the transportation mode share from single passenger cars to public transit, bicycling, and walking must be a significant part of short- and long-term planning goals if the state is to achieve the reductions in VMT and greenhouse gas emissions required by current law.*

*—AB 1358, California Complete Streets Act of 2008*

### *Policy AQ 1.7 Bicycle and pedestrian travel*

Encourage bicycle and pedestrian use by supporting the policies found in the Regional Transportation Plan, County Bikeways Plan, Land Use and Circulation Element, and County Parks and Recreation Element. In addition, support public and private efforts to facilitate bicycling and walking for transportation and recreation. (E8)

- ***Implementation Strategy AQ 1.7.1 Bicycle racks at County facilities***
  Provide, or work with other County agencies to provide, bicycle racks and storage facilities in public areas, such as County buildings and facilities, parks, and community centers.

- ***Implementation Strategy AQ 1.7.2 Rails-to-trails***
  Coordinate to identify abandoned rail rights-of-way not planned for transit or freight use, analyze the feasibility of their use for non-motorized transportation, and incorporate them into the County's Parks and Recreation Element, the Bikeways Plan, and the Non-Motorized Transportation Program of the Regional Transportation Plan as appropriate.

*Freight and passenger trails share railways in the county.*

### *Policy AQ 1.8 Support SLO Regional Rideshare*

Support San Luis Obispo Regional Rideshare's Transportation Choices Programs that promote transportation alternatives by providing financial or other incentives to employers, employees, and commuters who develop Trip Reduction Plans and implement commute options.

### *Policy AQ 1.9 Use of rail*

Encourage and facilitate, where appropriate, the use of railways as an alternative to trucking materials out of the county by preserving existing services and rights-of-way and investigating the feasibility of increasing general freight traffic by developing additional loading facilities. Railways should also be encouraged for use by passengers. (E11)

**GOAL 2** THE COUNTY WILL BE A LEADER IN IMPLEMENTING AIR QUALITY PROGRAMS AND INNOVATIONS.

*Policy AQ 2.1 County employee trip reduction*

Reduce employee commute-related vehicle trips. County departments will take the lead in implementing innovative employer-based trip reduction programs for their employees.

◇ ***Implementation Strategy AQ 2.1.1 Commute + Program***
Continue to promote, support, and expand the use of transit, vanpooling, carpooling, biking, teleworking, and walking to work through its Commute + Program.

◇ ***Implementation Strategy AQ 2.1.2 Alternative work arrangement***
Support alternative work arrangements such as flexible work schedules, compressed work weeks, telecommuting, and tele-working (satellite offices) as feasible without compromising public service.

◇ ***Implementation Strategy AQ 2.1.3 Employee Commuting Survey***
Collaborate with SLO Rideshare to conduct an annual online Employee Commuting Survey regarding employee travel modes, behavior, and VMT. Use the results to develop programs and incentives that will reduce VMT.

*Policy AQ 2.2 County employee business travel*

Reduce employee work-related vehicle trips.

◇ ***Implementation Strategy AQ 2.2.1 Video-conferencing***
Continue to support the use of video or tele-conferencing in lieu of employee travel to conferences and meetings when feasible.

◇ ***Implementation Strategy AQ 2.2.2 Inventory employee business travel***
Regularly compile employee miles traveled by all modes (automobile, plane, trains, etc.) for official County business. Identify opportunities to reduce greenhouse gas emissions resulting from employee business travel as feasible.


*SLO Regional Rideshare's Lucky Bucks program is an example of an employer-supported trip reduction program.*

***Alternative fuel** means a nonpetroleum fuel, including electricity, ethanol, biodiesel, hydrogen, methanol, or natural gas that, when used in vehicles, has demonstrated, to the satisfaction of the CARB to have the ability to meet applicable vehicular emission standards. AB 1007 also includes petroleum fuel blended with nonpetroleum constituents, such as E85 or B20, as alternative fuels. The federal Energy Policy Act of 1992 also includes propane as an alternative fuel.*

***Clean fuels** are fuels which have lower emissions than conventional gasoline and diesel, including alternative fuels and reformulated gasoline and diesel.*

### *Policy AQ 2.3 Convert County fleet*

Replace or convert conventional fuel vehicles in the County fleet with clean, alternative fuel vehicles. *(E15)*

◇ ***Implementation Strategy AQ 2.3.1 Alternative Fuel Strategy***

Adopt an Alternative Fuel Strategy to:

a. Set a fuel efficiency standard for the County fleet,

b. Ensure that new additions to the County fleet are alternatively fueled vehicles,

c. Create a timeline for replacement/conversion of County vehicle fleets to alternative fuel technologies, such as biodiesel, electricity, ethanol, hydrogen, natural gas, propane, or hybrid propulsion, and

d. Establish a network of alternative refueling facilities.

### *Policy AQ 2.4 Waste collection vehicles*

Encourage waste haulers on contract to the County to use clean, alternative fuels for waste collection vehicles.

### *Policy AQ 2.5 Use of clean fuels*

Encourage the use of clean fuels and the development of countywide fueling stations that distribute clean fuels through the County's participation in the Central Coast Clean Cities Coalition (C5). (E13)

### *Policy AQ 2.6 Alternative fuel incentives*

Support incentives to residents, fleet operators, school districts, and employers to purchase and use alternative fuel vehicles as local, state, or federal funding sources become available. (E14)

**GOAL 3** STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS WILL BE ATTAINED AND MAINTAINED.

*Policy AQ 3.1 Coordinate with other jurisdictions*

Coordinate with neighboring jurisdictions and affected agencies to address cross-jurisdictional and regional transportation and air quality issues.

◇ ***Implementation Strategy AQ 3.1.1 Air Quality Mitigation Measures***

Coordinate with the San Luis Obispo Air Pollution Control District (APCD) and cities to identify feasible, cost-effective, consistent, and comprehensive air quality mitigation measures and programs to reduce short-term, operational, and cumulative impacts of new development on air quality.

◇ ***Implementation Strategy AQ 3.1.2 Consistency with APCD plans***

Prepare amendments to the Framework for Planning that include criteria to avoid General Plan Amendments and land use designation changes that are not consistent with the San Luis Obispo APCD's approved plans, i.e., Toxic Risk Management Plan, PM Report, Clean Air Plan, and CEQA Handbook.

*Policy AQ 3.2 Attain air quality standards*

Attain or exceed federal or state ambient air quality standards (the more stringent if not the same) for measured criteria pollutants.

◇ ***Implementation Strategy AQ 3.2.1 Use of APCD's CEQA Guidelines***

The County's CEQA process will use the APCD's CEQA Guidelines to determine significance of impacts and to identify minimum project design and mitigation requirements.

*Policy AQ 3.3 Avoid air pollution increases*

Avoid a net increase in criteria air pollutant emissions in planning areas certified as Level of Severity II or III for Air Quality by the County's Resource Management System (RMS).

◇ ***Implementation Strategy AQ 3.3.1 Identify regional or local mitigation projects***
The County will collaborate with the APCD and other agencies as appropriate to identify local or regional retrofit or mitigation projects with quantifiable reductions.

*Policy AQ 3.4 Toxic exposure*
Minimize public exposure to toxic air contaminants, ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, and lead.

*Policy AQ 3.5 Equitable decision making*
Ensure that land use decisions are equitable and protect all residents from the adverse health effects of air pollution.

*Policy AQ 3.6 Strategic growth principles*
Ensure that implementation of the Strategic Growth principles and goals are balanced with protection of sensitive receptors near high-volume transportation routes and sources of toxic emissions (i.e. railyards, downtown centers, gasoline development facilities, chrome platers, dry cleaners, and refineries).

◇ ***Implementation Strategy AQ 3.6.1 Identify health risks to sensitive receptors***
Provide an analysis of potential health risks and identify mitigation measures to reduce risk to acceptable levels for projects involving sensitive receptors proposed within 500 feet of freeways and high-speed highways, consistent with APCD criteria.

*Policy AQ 3.7 Reduce vehicle idling*
Encourage the reduction of heavy-vehicle idling throughout the county, particularly near schools, hospitals, senior care facilities, and areas prone to concentrations of people, including residential areas.

*Policy AQ 3.8 Reduce dust emissions*
Reduce PM10 and PM2.5 emissions from unpaved and paved County roads to the maximum extent feasible.

◇ ***Implementation Strategy AQ 3.8.1 Reduce PM emissions from County roads***

1) Implement all APCD particulate matter (PM) emission controls,
2) Continue efforts to clean paved roads, and
3) Post reduced speed limits, and/or pave or "chip seal" County-maintained dirt roads to minimize fugitive dust.

**GOAL 4**

GREENHOUSE GAS EMISSIONS FROM COUNTY OPERATIONS AND COMMUNITYWIDE SOURCES WILL BE REDUCED FROM BASELINE LEVELS BY A MINIMUM OF 15% BY 2020.

*Policy AQ 4.1 Reduce greenhouse gas emissions*

Implement and enforce State legislative or regulatory standards, policies, and programs designed to reduce greenhouse gas emissions.

*Policy AQ 4.2 Identify greenhouse gas emissions*

Quantify, reduce, and mitigate greenhouse gas emissions.

◇ ***Implementation Strategy AQ 4.2.1 Climate Action Team***

Identify a Climate Action Team within 90 days of adoption of this Element. The team shall consist of representatives from key County departments and agencies, including but not limited to the departments of Administration, General Services, Planning and Building, and Public Works.

◇ ***Implementation Strategy AQ 4.2.2 2006 GHG Emissions Baseline Inventory Report***

Refer to the 2006 Greenhouse Gas Emissions Baseline Inventory Report as the baseline for greenhouse gas emissions levels from County municipal operations and community-related activities until updated. (Report included as **Appendix 1**).

*Transportation represents 41 percent of total greenhouse gas emissions in California.*

*—The State Energy Resources Conservation and Development Commission*

◇ ***Implementation Strategy AQ 4.2.3 Update GHG emissions inventory report***

Inventory greenhouse gas emissions from county operations and community-wide sources on a regular basis, at a minimum of every 5 years, in accordance with CARB protocol.

◇ ***Implementation Strategy AQ 4.2.4 Communitywide GHG emissions reduction target***

Based on the results of the baseline greenhouse gas emissions inventory, stakeholder input, and state legislation and regulations, establish a communitywide greenhouse gas emissions reduction target of at least 15% by 2020 (percentage reduction from baseline year by target year).

◇ ***Implementation Strategy AQ 4.2.5 Prepare and Implement Climate Action Plan***

Prepare and implement a Climate Action Plan to achieve the greenhouse gas emissions reduction target. Government and community greenhouse gas reduction measures included in the plan will address key areas, including, but not limited to:

a. Transportation
b. Fuel (source and fleets)
c. Solid waste and recycling
d. Land use (Strategic Growth practices and principles to reduce VMT)
e. Energy use
f. Renewable energy
g. Materials
h. Commercial and industrial practices
i. Public education
j. Partnerships with local and regional organizations
k. Green building procedures.

◇ ***Implementation Strategy AQ 4.2.6 Monitor and Update Climate Action Plan***
Regularly monitor, measure, and report on the implementation status of the Climate Action Plan and adapt strategies to reduce greenhouse gas emissions over time.

*Policy AQ 4.3 GHG emissions from County operations*
Actively work to reduce greenhouse gas emissions from County operations, specifically in the sectors of energy, transportation, and waste, as identified in the 2006 Greenhouse Gas Emissions Baseline Inventory Report.


*Example of a hybrid technology vehicle*

◇ ***Implementation Strategy AQ 4.3.1 Reduce GHG emissions from County operations***
Reduce greenhouse gas emissions from County operations and practices, including emissions from the following areas:

a. County fleet managed by General Services, Public Works, Sheriff's Department, Library Services, Cal Fire, and other departments as applicable
b. Procurement
c. Energy use
d. Materials
e. Water
f. Waste and
i. Employee transportation (work-related travel and employee commuting).

*Policy AQ 4.4 Development projects and land use activities*
Reduce greenhouse gas emissions from development projects and other land use activities.

◇ ***Implementation Strategy AQ 4.4.1Amend Initial Study Checklist: GHG emissions***
Amend Initial Study Checklist to address potential project impacts to greenhouse gas emissions, energy use, and materials.

◇ ***Implementation Strategy AQ 4.4.2 Reduce methane emissions***

Reduce methane emissions released from waste disposal through increased diversion rates, recycling, methane capture and recovery, and other strategies identified in the Climate Action Plan. (Refer to **Energy Policies 5.1 – 5.6**.)

◇ ***Implementation Strategy AQ 4.4.3 Identify GHG emissions from agricultural activities***

Identify greenhouse gas emissions from agricultural activities and collaborate with stakeholders to identify reduction measures.

◇ ***Implementation Strategy AQ 4.4.4 Reduce GHG emissions from County-related travel***

Reduce greenhouse gas emissions from County transportation activities through fleet conversion to alternative fuels, preparation of a Transportation Demand Management program for employees, and other strategies identified in the Climate Action Plan. (Also refer to **Policy AQ 2.3** above.)

◇ ***Implementation Strategy AQ 4.4.5 Reduce GHG emissions from community-wide transportation activities***

Reduce greenhouse gas emissions resulting from community-wide transportation activities through expanded use of alternative fuel vehicles, increased use of alternative transportation modes, decreased VMT, development of compact, mixed-use, infill projects in established communities and urban areas, and other strategies identified in the Climate Action Plan. (Also refer to **Policies AQ 1.1 – 1.8** above.)

◇ ***Implementation Strategy AQ 4.4.6 Reduce GHG emissions from County energy use***

Reduce greenhouse gas emissions resulting from energy use in the County buildings, facilities, and operations through adoption of energy efficiency and energy conservation measures, use of renewable energy sources, and other strategies identified in the Climate Action Plan. (Also refer to **Energy Policies 2.1 – 2.3**.)

### *Policy AQ 4.5 Carbon Sequestration*

Reduce net carbon emissions through the preservation, protection, and enhancement, as appropriate, of the county's

***Carbon sequestration** is the net removal of carbon dioxide ($CO_2$) from the atmosphere. This may occur through the enhancement of natural processes (i.e. terrestrial sequestration - the uptake of carbon by trees, vegetation, and soils) or through technological processes, such as the placement of $CO_2$ into a geologic repository (geologic sequestration) in such a way that it will remain permanently sequestered.*

*The term "**carbon sinks**" is also used to describe agricultural and forestry lands that absorb $CO_2$.*

*- U.S. EPA Carbon Sequestration FAQ and the U.S. Dept. of Energy National Energy Technology Laboratory Carbon Sequestration FAQ.*

terrestrial and aquatic carbon sequestration resources, including the county's lakes, soils, and native forests, trees, and plants

◇ ***Implementation Strategy AQ 4.5.1 Identify carbon sequestration resources***
Identify existing and potential opportunities for terrestrial and aquatic sequestration in the county, including but not limited to County lands, reclaimed mining lands, agricultural lands, and other areas or activities as appropriate.

*Policy AQ 4.6 Regional organizations*
Collaborate and coordinate with regional organizations and local jurisdictions to reduce greenhouse gas emissions.

◇ ***Implementation Strategy AQ 4.6.1 Partnerships with utilities***
Work with utilities to reduce greenhouse gas emissions and energy use.

◇ ***Implementation Strategy AQ 4.6.2 Regional collaboration to reduce GHG emissions***
Participate in regional organizations that support greenhouse gas emissions reductions. Examples include the APCD's Greenhouse Gas Emissions and Climate Change Stakeholder Group and other APCD-sponsored programs, ICLEI Cities for Climate Protection program, PG&E Energy Watch, San Luis Obispo Regional Rideshare, San Luis Obispo Council of Governments programs, Central Coast Clean Cities Coalition (C5), and others as appropriate.

**GOAL 5**

THE COUNTY WILL ADAPT TO ADVERSE CLIMATE CHANGE.

*Policy AQ 5.1 Adapt to climate change*
Identify needs and strategies to monitor, prepare for, and adapt to a changing climate.

◇ ***Implementation Strategy AQ 5.1.1 Risk of sea level rise***
Work with the Office of Emergency Services to identify the potential for sea level rise in the coastal planning areas. Amend the County's CEQA Initial Study Checklist, Area Plans,

the Coastal Zone Land Use Ordinance, Safety Element, and Local Hazard Mitigation Plan as appropriate.

◇ ***Implementation Strategy AQ 5.1.2 Climate Change Adaptation***

Incorporate climate change impacts, projections, adaptation needs, and strategies into County planning documents in coordination with the California Coastal Commission, water districts, wildlife agencies, flood control and fire districts, and other relevant organizations. Plans should address human health and the health and adaptability of natural systems, including the following:

a. Water resources including expanded rainwater harvesting, water storage and conservation techniques, water re-use, desalination, and water-use and/or irrigation efficiency.

b. Biological resources including land acquisition, creation of marshlands/wetlands as a buffer against sea level rise and flooding, and protection of existing natural barriers.

c. Public health including heat-related health plans, vector control, safe water, and improved sanitation.

d. Environmental hazards including seawalls, storm surge barriers, and fire protection.

*Policy AQ 5.2 Public awareness*

Increase public awareness about climate change and lifestyle changes that will reduce greenhouse gas emissions.

◇ ***Implementation Strategy AQ 5.2.1 Increase public awareness about climate change***

Work with local government agencies, schools and universities, the business community, and nonprofit organizations to increase public awareness about climate change and lifestyle changes that reduce greenhouse gas emissions.

◇ ***Implementation Strategy AQ 5.2.2 Climate change research***

Work with climate science experts on local climate change impacts, mitigations, and adaptation to inform public policy decisions.

- ***Implementation Strategy AQ 5.2.3 Carbon footprint calculator***
  Provide and publicize an online "carbon footprint calculator" and other resources for individuals, households, and businesses to assist in the reduction of carbon footprints.

- ***Implementation Strategy AQ 5.2.4 Provide climate change information on County website***
  Provide and distribute climate change information through the County's website, publications, and offices.

- ***Implementation Strategy AQ 5.2.5 Support green business***
  Support local efforts to develop "green" or sustainable business practices that reduce greenhouse gas emissions and improve overall quality of life in the county.

## Summary of Implementation Strategies

For each implementation strategy described in this chapter, the following table (**Table AQ-2**) summarizes the County department or other agency that has primary responsibility for carrying out that strategy. In addition, the table summarizes the priority, estimated year of initiation, and potential source of funding of each strategy. The actual timeframe for implementing the strategies is dependent upon the availability of adequate staff and funding.

TABLE AQ-2
AIR QUALITY IMPLEMENTATION

| Implementation Strategy | Responsible Department or Agency[1] | Priority | Timeframe to Start | Possible Funding Sources[2] |
|---|---|---|---|---|
| IS AQ 1.1.1 Strategic Growth Principles | PB | Essential | Immediately | DB |
| IS AQ 1.2.1 VMT reduction strategies | PB | Essential | 2010 | DB |
| IS AQ 1.3.1 Connectivity in new development | PB, PW | High | Immediately | N/A |
| IS AQ 1.5.1 Countywide VMT Reduction Program | PB, APCD, COG | High | 2012 | Grant, GF |
| IS AQ 1.5.2 Use of LTF for transit | COG | Essential | Immediately | COG |

| Implementation Strategy | Responsible Department or Agency[1] | Priority | Timeframe to Start | Possible Funding Sources[2] |
|---|---|---|---|---|
| IS AQ 1.5.3 Evaluate Countywide Transportation Tax | COG, PW, cities | Medium | 2011 | GF |
| IS AQ 1.5.4 Include bus routes in Land Use and Circulation Element | PB, RTA, cities | Medium | 2011 | DB |
| IS AQ 1.6.1 Identify intermodal hubs | PB, RTA, COG, PW | High | Immediately | DB |
| IS AQ 1.6.2 Amend Land Use Element: Transit Oriented Development | PB, PW, RTA | High | Immediately | DB |
| IS AQ 1.6.3 Adopt Complete Streets Ordinance | PB, PW, COG, RTA | Essential | 2013 | DB |
| IS AQ 1.6.4 Support new transit nodes | PW, PB | Medium | 2011 | DB |
| IS AQ 1.7.1 Bicycle racks at County facilities | GS, cities, CSDs | Low | 2010 | GF, grant |
| IS AQ 1.7.2 Rails-to-trails | PW, COG, GS | Low | 2012 | GF, grant |
| IS AQ 2.1.1 Commute + Program | All departments | High | Immediately[3] | N/A |
| IS AQ 2.1.2 Alternative work arrangement | All departments | High | Immediately | N/A |
| IS AQ 2.1.3 Employee Commuting Survey | Admin, IT, PB | Low | 2010 | DB |
| IS AQ 2.2.1 Video-conferencing | All departments | High | Immediately | N/A |
| IS AQ 2.2.2 Inventory employee business travel | PB | High | Immediately | DB |
| IS AQ 2.3.1 Alternative Fuel Strategy | GS | Medium | 2010 | DB, GF, grant |
| IS AQ 3.1.1 Air Quality Mitigation Measures | APCD, PB, cities | Medium | 2011 | DB, grant |
| IS AQ 3.1.2 Consistency with APCD plans | PB, APCD | Low | 2012 | DB |
| IS AQ 3.2.1 Use of APCD's CEQA Guidelines | PB, APCD | High | Immediately | N/A |
| IS AQ 3.3.1 Identify regional or local mitigation projects | PB, APCD, Cities | High | 2010 | N/A |
| IS AQ 3.6.1 Identify health risks to sensitive receptors | PB, APCD | High | Immediately | N/A |

| Implementation Strategy | Responsible Department or Agency[1] | Priority | Timeframe to Start | Possible Funding Sources[2] |
|---|---|---|---|---|
| IS AQ 3.8.1 Reduce PM emissions from County roads | PW, PB, APCD | High | Immediately | DB |
| IS AQ 4.2.1 Climate Action Team | PB | Essential | Immediately | DB |
| IS AQ 4.2.2 2006 GHG Emissions Baseline Inventory Report | PB, APCD, PW, GS | High | Immediately[3] | DB |
| IS AQ 4.2.3 Update GHG emissions inventory report | PB, APCD, PW, GS | High | Immediately | N/A |
| IS AQ 4.2.4 Communitywide GHG emissions reduction target | PB, APCD | Medium | 2010 | DB |
| IS AQ 4.2.5 Prepare and Update Climate Action Plan | PB, APCD | Medium | 2010 | DB |
| IS AQ 4.2.6 Monitor and Update Climate Action Plan | APCD, PB, PW | Essential | 2010 | DB |
| IS AQ 4.3.1 Reduce GHG emissions from County operations | All departments | High | Immediately | DB, GF |
| IS AQ 4.4.1 Amend Initial Study Checklist: GHG emissions | PB, PW | High | Immediately | DB |
| IS AQ 4.4.2 Reduce methane emissions | APCD, PW | Medium | 2011 | DB |
| IS AQ 4.4.3 Identify GHG emissions from agricultural activities | AG, APCD, PB | Med | 2013 | DB |
| IS AQ 4.4.4 Reduce GHG emissions from County-related travel | GS, PW | High | 2011 | GF, grants |
| IS AQ 4.4.5 Reduce GHG emissions from community-wide transportation activities | PB, cities, COG | High | Immediately | DB, grants |
| IS AQ 4.5.1 Identify carbon sequestration resources | PB, PW, AG | Medium | 2011 | GF |
| IS AQ 4.6.1 Partnerships with utilities | GS, PB, APCD | High | 2010 | GF, grant |
| IS AQ 4.6.2 Regional collaboration to reduce GHG emissions | PB, GS, APCD, Cities, CG | High | Immediately[3] | GF, APCD, Cities, COG |
| IS AQ 5.1.1 Risk of sea level rise | PB, OES | Low | 2013 | DB |

| Implementation Strategy | Responsible Department or Agency[1] | Priority | Timeframe to Start | Possible Funding Sources[2] |
|---|---|---|---|---|
| IS AQ 5.1.2 Climate Change Adaptation | PB, PW, EH | Low | 2013 | DB |
| IS AQ 5.2.1 Increase public awareness about climate change | APCD, PB | Medium | Immediately | DB |
| IS AQ 5.2.2 Climate change research | APCD, PB | Medium | 2010 | DB |
| IS AQ 5.2.3 Carbon footprint calculator | APCD | Low | Immediately | DB |
| IS AQ 5.2.4 Provide climate change information on County website | PB, APCD | Medium | Immediately | DB |
| IS AQ 5.2.5 Support green business | PB, PW, GS | High | Immediately | DB |

Notes:
1 Department abbreviations:
Admin = County Administrative Office
APCD = SLO Air Pollution Control District
Cities = Incorporated cities
COG = San Luis Obispo Council of Governments
CSDs = Community Service Districts
EH = County Environmental Health Services Division
GS = County General Services Agency
IT = County Information Technology Department
OES = County Office of Emergency Services
PB = County Department of Planning and Building
PW = County Department of Public Works
RTA = San Luis Obispo Regional Transit Agency
2 Funding source abbreviations:
GF = General Fund
DB = Planning and Building Department Budget
3 Denotes an ongoing activity.
Source: Department of Planning and Building, March 2009.

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